

USPTO Customer No. 25400

Case 5594

ARGUMENT FOR PATENTABILITY**Status of Claim Amendments**

The pending claims under consideration are Claims 1, 3-7, 9-21, and 23. Claims 24-32 are withdrawn, pursuant to a restriction requirement. Claim 1 has been amended to modify the description of the woven textile sleeve from "a woven, single cell textile sleeve" to "a woven textile sleeve, said textile sleeve forming a single longitudinal channel disposed about said guide tubes...". Applicant believes that this language is sufficient to clarify the intended scope of the invention, as will be described herein.

Rejections under 35 USC 103

Claims 1, 3-7, 9-12, and 23 are rejected under 35 USC 103(a) as being unpatentable over US Patent 6,796,547 to WASHBURN, in view of US Patent 6,398,190 to LI and further in view of US Patent 5,027,864 to CONTI et al.

The argument presented by the Office in making this rejection is essentially as follows:

WASHBURN pulls elongate members (inner duct guide tubes having a chosen fire resistant coating) through a conduit using a pull member attached to the respective ends of the elongate members. LI teaches that elongate members may be pulled through a conduit by means of a textile monofilament or composite sleeve material made of nylon or polyvinylfluoride having a 600-lb strength disposed about the elongate members so that the elongate member is in slidable relation to the textile sleeve.

To provide in WASHBURN a textile sleeve about the elongate member(s) would have been obvious to one of ordinary skill in the art, in view of the disclosure of LI. One would have been motivated to do this in order to enable the elongate members of WASHBURN (which may be fragile) to be pulled through a duct without damage.

USPTO Customer No. 25200

Case 5594

Employing any well-known additive or coating for the purpose of fire retardance is deemed obvious. Similarly, to choose monofilament or multifilament or single component or composite, dependent upon the desired strength and flexibility properties, is also deemed to be obvious.

CONTI teaches that a guide tube may contain a means for installing a cable, such as a pull line.

To provide in the guide tube above a pull line would have been obvious in view of the disclosure of CONTI. One of ordinary skill would have been motivated to do this in order to facilitate the convenient installation of cables in the innerduct. The shape of the pull cord is no more than an obvious matter of design choice. While the CONTI cord is flat, WASHBURN teaches that a pull cord may be round. The shape of the pull cord is found to be of immaterial difference; however, to employ a round pull cord would have been obvious in view of WASHBURN.

Claim 1, from which all other rejected claims depend directly or indirectly, has been amended to recite an innerduct guide tube assembly comprising a plurality of polymer guide tubes, each of which includes a means for installing a cable therein, and a woven textile sleeve disposed about the guide tubes in slidable relation thereto, where the woven textile sleeve forms a single longitudinal channel.

In the case of WASHBURN, cables are conveyed through an outer conduit by a plurality of "ducts", which are collapsible tubes having a three-layer structure. The outermost layer of the structure is a durable and flexible material, such as PVC, urethane, thermoplastic elastomer, silicone, or vulcanized rubber (Col. 1, lines 41-45). Further, the ducts preferably have internal and/or external ribs for reducing frictional forces.

USPTO Customer No. 25...

Case 5594

LI teaches a textile "outer jacket", or sleeve, for carrying one or more cables through a conduit. Preferably, the outer jacket is made of a woven polymeric material.

From Applicant's understanding, CONTI is directed to a plurality of interlocking inner duct structures for installing cables into a conduit, in which the inner duct structures are formed from extruded plastic material. CONTI discloses that woven pull lines may be used for pulling cables through the inner duct structures and into the conduit.

Both WASHBURN and CONTI are directed to extruded polymer guide tubes through which cables are conveyed. LI is directed to a textile sleeve through which cables are conveyed. In making this rejection, the Office has suggested that the combination of WASHBURN, LI, and CONTI provides a teaching of Applicant's invention.

To establish a *prima facie* case of obviousness, there must be some motivation to combine the references. (MPEP 2143.01) Applicant respectfully submits that there is no motivation to make the combination of WASHBURN or CONTI with LI.

The Office suggests that one would be motivated to use LI's textile sleeve to carry WASHBURN's ducts through a conduit in order to prevent damage to WASHBURN's ducts. Applicant respectfully finds nothing in either reference to suggest such motivation might exist. Although WASHBURN's ducts are collapsible, they are not fragile, as suggested by the Office. Rather, WASHBURN provides its ducts with internal and/or external ribs (as discussed previously) and connection points that provide structure and support to the individual ducts. WASHBURN also describes grouping its ducts (i) by the aforementioned connection points; (ii) by heating, fusing, or adhesives; or (iii) by tying together, such as with plastic banding (Col. 5, lines 18-29). Thus, Applicant submits that

USPTO Customer No. 25200

Case 5594

the Examiner's proposed combination of WASHBURN and LI addresses a non-existent problem with the ducts of WASHBURN.

The same arguments apply to the combination of LI and CONTI, since CONTI also teaches extruded guide tubes, or ducts, which are similar to those of WASHBURN. Thus, there is no motivation to combine LI with WASHBURN and/or CONTI.

Additionally, Applicant submits that the proposed combination is made more untenable by the fact that WASHBURN relies on the use of lubricants to facilitate the installation process (see, e.g., WASHBURN's Col. 6, lines 31-36), whereas LI is designed to obviate the need for lubricants (see, e.g., LI's Col. 4, lines 13-19). The installation processes include contradictory statements, thereby teaching away from the proposed combination.

As mentioned above, the polymer tubes of WASHBURN and CONTI are produced with external ribs along the length of the tubes. Such external ribs are clearly visible in FIG. 4 of WASHBURN and FIG. 3 of CONTI. The purpose of such external ribs is to prevent or reduce the twisting of the ducts relative to each other as they are fed through the conduit (see, e.g., WASHBURN's Col. 5, lines 27-29 and CONTI's Col. 5, lines 18-28). Thus, the references teach that the polymer tubes are in a fixed relationship with each other within the conduit.

Such a structure differs significantly from the polymer guide tubes of the present invention. In the present invention, the guide tubes are in slidable relation with the textile sleeve and with the other guide tubes. Hence, the guide tubes are able to move within the textile sleeve in both a longitudinal manner (as when installed) and also in a rotational manner (as when bending around a curve). Examples 1-3 on pages 6 and 7

USPTO Customer No. 25200

Case 5594

of the specification describe bending the guide tubes about curves with an 8-inch or 12-inch radius. Such bending would be considerably more difficult if the guide tubes were in fixed position relative to one another, thereby preventing (for example) tubes toward the inside of a curve from bending more than tubes on the outside of the curve.

Therefore, Applicants submit that the combination of the WASHBURN tubes, the CONTI pull lines, and the LI textile sleeve does not arrive at Applicant's invention, because the WASHBURN tubes are both structurally and functionally different from those presently claimed.

Further, the combination of WASHBURN and CONTI with LI fails to teach all of the limitations of Applicant's claims, another requirement necessary for establishing a *prima facie* case of obviousness (MPEP 2143.03). There is no teaching in WASHBURN, CONTI, or LI of an innerduct guide tube assembly comprising a textile sleeve and a plurality of guide tubes positioned inside the textile sleeve in slidable relation to the sleeve and to the other guide tubes.

The WASHBURN reference provides only the teaching of a plurality of interconnected or attached guide tubes. The LI reference speaks only of a cable-containing outer jacket and provides no teachings of guide tubes at all. The CONTI reference also teaches interlocked guide tubes, failing to meet Applicant's limitation that such tubes are in slidable relation to one another.

Because there is no motivation to combine the references, and because the references fail to teach all of the limitations of Applicant's claims, Applicant submits that the rejection on the basis of 35 USC 103(a) over WASHBURN, LI, and CONTI is hereby

USPTO Customer No. 25200

Case 5594

traversed. Accordingly, Applicant respectfully requests that the rejection of Claims 1, 3-7, and 9-12 be withdrawn.

* * *

Claims 13-16 are rejected under 35 USC 103(a) as being unpatentable over US Patent 6,796,547 to WASHBURN, in view of US Patent 6,398,190 to LI and US Patent 5,027,864 to CONTI et al., as provided above, and further in view of US Patent 6,230,749 to KERTESZ.

The argument presented by the Office in making this rejection is essentially as follows:

KERTESZ teaches that a manufactured product may include a flame retardant additive. To provide a flame retardant additive to either or both of the textile sleeve or the inner elongate duct *supra* would have been obvious in view of the disclosure of KERTESZ. One would be motivated to do this in order to prevent the products from being damaged by fire.

As best understood, KERTESZ teaches a multi-layer tube for use in motor vehicles, in which the outer layer is a thermoplastic material and the inner layer(s) are thermoplastic diffusion barrier layers, one of which is directly bonded to the outer layer. KERTESZ mentions that a flame retardant additive may be included in one or more layers of the tube structure, and is preferably included in the outer layer.

The deficiencies of the combination of WASHBURN, LI, and CONTI, in providing a teaching of all of the limitations of Applicant's claims, have been discussed above. The addition of KERTESZ to the combination does not remedy these deficiencies, even if one were motivated to incorporate the teachings of KERTESZ, which Applicant respectfully disputes.

USPTO Customer No. 25...

Case 5594

KERTESZ is directed to solving the problem of providing a durable hose construction for the transport of fluids, such as fuel, oil, and antifreeze, within a motor vehicle. WASHBURN is directed to the problem of inserting cables into a service line or pipeline with a minimal amount of flow reduction. LI is directed to the problem of increasing the amount of speed and force with which a cable may be pulled through a conduit, while reducing the amount of friction and need for lubricants, by providing a textile sleeve that surrounds and protects the cable. CONTI is directed to the problem of reducing friction while pulling cable into a duct (such friction being reduced by having interior and exterior ribs along the perimeter of the duct).

Hence, in reviewing the problems to which the cited references are addressed, Applicant maintains the position that the KERTESZ patent is from a non-analogous field of endeavor. MPEP 2141.01(a) states:

"In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).

The KERTESZ reference is neither from the field of Applicant's endeavor nor is it reasonably pertinent to the problem solved by Applicant's invention (i.e., the efficient transport of multiple cables through a conduit using polymer guide tubes carried in a textile sleeve). Applicant, therefore, submits that KERTESZ is non-analogous art and should not properly be included in the present rejection. Moreover, Applicant believes that the issue of whether the reference is non-analogous has been specifically and pointedly addressed.

USPTO Customer No. 25..JJ

Case 5594

However, even if the KERTESZ reference is included in the rejection of Claims 13-16, for the sake of argument, the combination still fails to provide any teaching or suggestion of an innerduct guide tube assembly, which contains a plurality of polymer guide tubes (each of which further contains installation means therein) and a woven textile sleeve disposed about the guide tubes, where the guide tubes are in slidable relation with the textile sleeve and the other guide tubes. KERTESZ, as discussed above, teaches only a flame retardant additive used in a hose and, therefore, provides no additional teachings necessary to establish a *prima facie* case of obviousness with regard to Claims 13-16.

Because the KERTESZ reference is believed to be non-analogous art, and because the references, even if combined, fail to teach all of the limitations of Applicant's claims, Applicant submits that no *prima facie* case of obviousness exists. Accordingly, believing the rejection to be traversed, Applicant respectfully requests the withdrawal of such rejection.

Claims 17, 18, and 21 are rejected under 35 USC 103(a) as being unpatentable over US Patent 6,796,547 to WASHBURN, in view of US Patent 6,398,190 to LI and US Patent 5,027,864 to CONTI et al., as provided above, and further in view of US Patent 6,304,698 to MORRIS.

The argument presented by the Office in making this rejection is essentially as follows:

MORRIS teaches that a textile sleeve may be multi-component wherein the warp is polyester and the fill is nylon. To make the textile sleeve *supra* from multi-component polyester and nylon would have been obvious, in view of the

USPTO Customer No. 25

Case 5594

disclosure of MORRIS. One would have been motivated to do this in order to provide the textile sleeve with the desired strength and flexibility properties.

MORRIS teaches a multi-cell innerduct structure useful for carrying cables through a conduit, in which the innerduct is made of monofilament nylon yarns in the warp and/or fill direction. In another embodiment, the warp is made of polyester yarns and the fill is made of nylon yarns.

MORRIS does not teach the use of multi-component yarns, as provided in present Claim 17 or the use of core-sheath types of fibers, as provided in present Claim 18. Additionally, none of WASHBURN, LI, or CONTI provides any teaching or suggestion of the limitations of Claims 17 and 18. Furthermore, Claims 17 and 18 include the limitations of Claim 1, from which they depend directly or indirectly. It has been discussed previously that the combination of WASHBURN, LI, and CONTI fails to teach the limitations of Claim 1, and the introduction of MORRIS in the rejection of Claims 17 and 18 is insufficient to overcome this deficiency. Specifically, MORRIS, like the other references, does not teach a guide tube assembly having a plurality of guide tubes disposed within a textile sleeve, where the guide tubes are in slidable relation with the textile sleeve and the other tubes.

Claim 21 provides that the textile sleeve is a woven fabric having polyester warp yarns and nylon fill yarns. Claim 21 depends from Claim 1 and contains all of the limitations thereof. WASHBURN, LI, and CONTI do not teach all of the limitations of Claim 1, and the introduction of MORRIS to teach a specific fabric construction, does not remedy this shortcoming. Additionally, MORRIS teaches a multi-cell structure and Claim 1 (from

USPTO Customer No. 252,000

Case 5594

which Claim 21 depends) has been amended to be limited to a textile sleeve that forms a single longitudinal channel disposed about the plurality of guide tubes.

Thus, because the references fail to teach all of the limitations of Applicant's claims, Applicant believes the rejection to be traversed and respectfully requests that it be withdrawn.

Claims 19-20 are rejected under 35 USC 103(a) as being unpatentable over US Patent 6,796,547 to WASHBURN, in view of US Patent 6,398,190 to LI, US Patent 5,027,864 to CONTI et al. and US Patent 6,304,698 to MORRIS, as provided above, and further in view of US Patent 4,942,069 to KEOGH.

The argument presented by the Office in making this rejection is essentially as follows:

KEOGH teach that glass core with a melamine coating is flame retardant. To provide the fiber *supra* with a glass core with a melamine coating would have been obvious, in view of the disclosure of KEOGH. One would be motivated to do this in order to prevent the fiber from being damaged by fire.

The deficiencies of WASHBURN, LI, CONTI, and MORRIS have been discussed above. Claims 19 and 20 depend from Claim 18 (discussed previously) and ultimately depend from Claim 1.

As best understood, KEOGH teaches a cable having a core surrounded by a thermoplastic sheath, where the sheath contains a flame retardant compound. The flame retardant is a metal hydrate, such as magnesium hydroxide or aluminum hydroxide. KEOGH mentions that the flame retardant sheath may be used with glass

USPTO Customer No. 252

Case 5594

cores in fiber optics applications (Col. 4, lines 53-54). KEOGH is completely silent about the use of textile products or polymer guide tubes to encase or carry their cables. KEOGH is directed to solving the problem of reducing the likelihood of duct fires only by including flame retardant in the cable sheath itself.

Although KEOGH teaches a specific flame retardant yarn construction, KEOGH fails to provide any teachings of the other limitations of Applicant's claims, which are not addressed by the combination of WASHBURN, LI, CONTI, and MORRIS. Specifically, the combination of WASHBURN, LI, CONTI, MORRIS, and KEOGH fails to teach a textile sleeve structure forming a single longitudinal channel, in which a plurality of polymer guide tubes is positioned, wherein the guide tubes further contain installation means for cables to be pulled therethrough, wherein the guide tubes are in slidable relation with the textile sleeve and the other tubes, and wherein the textile sleeve is made from fabric containing glass core yarns wrapped with melamine and, as in the case of Claim 20, further containing a layer of fire resistant polyester. Applicant submits that such a structure is arrived at only with the benefit of hindsight, which is impermissible in establishing a *prima facie* case of obviousness. (MPEP 2142)

Because there is no motivation to combine the KEOGH reference with the previous combination, and because, when combined, the references fail to teach all of the limitations of Applicant's claims, Applicant believes that no *prima facie* case of obviousness exists with respect to Claims 19 and 20. Accordingly, Applicant respectfully requests that such rejection be withdrawn.

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USPTO Customer No. 252..J

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CONCLUSION

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In view of all of the previous remarks, it is respectfully requested that the Request for Continued Examination be accepted and the above amendments and remarks be entered. Applicant respectfully submits that this application is now in condition for allowance. Entry of this Amendment and issuance of a Formal Notice of Allowance is courteously solicited.

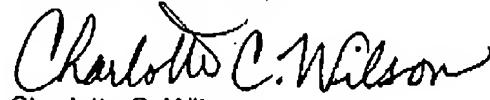
Should any issues remain after consideration of these Remarks, the Examiner is invited and encouraged to telephone the undersigned in the hope that any such issue may be resolved promptly and satisfactorily.

This response is accompanied by a Petition for Extension of Time (two months). In the event that there are additional fees associated with the submission of these papers (including extension of time fees), authorization is hereby provided to withdraw such fees from Deposit Account No. 04-0500.

Respectfully submitted,

Date: February 8, 2007

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